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10/582,897	06/13/2006	Masanori Akita	TR-US065126	4958

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GLOBAL IP COUNSELORS, LLP		
1233 20TH STREET, NW, SUITE 700		
WASHINGTON, DC 20036-2680		

EXAMINER
CHEN, XIAOLIANG

ART UNIT	PAPER NUMBER
2841	

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/582,897

Applicant(s)

AKITA ET AL.

Examiner

XIAOLIANG CHEN

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Amendment*

1. Acknowledgement is made of Amendment filed 12-10-2007.

Claim 1 is amended.

Claim 6 is added.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 6 are rejected under 35 U.S.C.103(a) as being unpatentable over Ishida et al. (US6365438) in view of Iketani et al. (US20020004250)

**Re claim 1**, Ishida et al. show and disclose

An electronic circuit board intermediate member comprising:

a carrier tape (tape 8, fig. 1C) being formed as an exfoliate layer (exfoliated adhesive tape [col. 8, line 19]),

a plurality of interposer boards (10, fig. 1C);

Ishida et al. does not disclose

good interposer boards;

Iketani et al. teaches a device wherein

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good interposer boards (the individual semiconductor devices are measured to determine their qualities [0055]);

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to measure the individual semiconductor devices of Ishida et al. as taught by Iketani et al., in order to improve the qualities of products.

Ishida et al. further disclose the good interposer boards being disposed on the carrier tape at every predetermined interval (fig. 1C), each good interposer board having a base member (100, fig. 1C) mounting an IC chip (fig. 11A), extended electrodes (26, fig. 11A) being formed on the base member, each electrode being connected to a corresponding electrode of the IC chip (6, fig. 1C), and an adhesive layer (adhesive layer of tape 8) being formed to cover the extended electrode.

**Re claim 2,** Ishida et al. show and disclose

A manufacturing method for manufacturing an electronic circuit board intermediate member comprising:

applying adhesive (adhesive tape 8, fig. 1C) on extended electrodes (9, fig. 1C) of an interposer board tape (fig. 1C), the interposer board tape being obtained by forming the extended electrodes on a base member (100, fig 1C), a plurality of IC chips (6, fig. 1C) being mounted on the base member, and each of the extended electrodes being connected to corresponding electrode of each of the IC chips (fig. 1C);

obtaining individual interposer boards by cutting the interposer board tape (In the cutting step, package body 100a is diced into circuit substrates 1 as shown in FIG. 1C and 1C' [col. 10, line 7]),

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disposing only the interposer boards on a carrier tape (tape 8, fig. 1C) at every predetermined interval (fig. 1C), the carrier tape being obtained by forming an exfoliate layer on a base tape (exfoliated adhesive tape [col. 8, line 19]).

Ishida et al. does not disclose

selecting only good interposer boards;

Iketani et al. teaches a device wherein

selecting only good interposer boards (the individual semiconductor devices are measured to determine their qualities [0055]);

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to measure the individual semiconductor devices of Ishida et al. as taught by Iketani et al., in order to improve the qualities of products.

**Re claim 3,** Ishida et al. show and disclose

A manufacturing apparatus for manufacturing an electronic circuit board intermediate member comprising:

first means for applying adhesive (adhesive tape 8, fig. 1C) on extended electrodes (9, fig. 1C) of an interposer board tape (fig. 1C), the interposer board tape being obtained by forming the extended electrodes on a base member (100, fig 1C), a plurality of IC chips (6, fig. 1C) being mounted on the base member, and each of the extended electrodes being connected to corresponding electrode of each of the IC chips (6, fig. 1C);

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second means for obtaining individual interposer boards by cutting the interposer board tape (In the cutting step, package body 100a is diced into circuit substrates 1 as shown in FIG. 1C and 1C' [col. 10, line 7]);

fourth means for disposing only the interposer boards on a carrier tape (adhesive tape 8, fig. 1C) at every predetermined interval (fig. 1C), the carrier tape being obtained by forming an exfoliate layer on one face of a base tape (exfoliated adhesive tape [col. 8, line 19]).

Ishida et al. does not disclose

third means for selecting only good interposer boards;

Iketani et al. teaches a device wherein

means for selecting only good interposer boards (the individual semiconductor devices are measured to determine their qualities [0055]);

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to measure the individual semiconductor devices of Ishida et al. as taught by Iketani et al., in order to improve the qualities of products.

**Re claim 6**, Ishida et al. show and disclose

The electronic circuit board intermediate member according to claim 1,

Wherein the adhesive layer (adhesive layer of tape 8) contacts the extended electrodes and the carrier tape (fig. 1C).

4. Claims 4-5 are rejected under 35 U.S.C.103(a) as being unpatentable over Ishida et al. in view of Iketani et al. and Emori et al. (US6378774).

**Re claim 4**, Ishida et al. show and disclose

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A manufacturing method for manufacturing non-contact ID card and the like comprising:

the electronic circuit board intermediate member (fig. 1C) being obtained by disposing interposer boards (100) on a carrier tape (8) at every predetermined interval (fig. 1C), the interposer board being obtained by mounting an IC chip (6, fig. 1C), by forming extended electrodes (9, fig. 1C) each connected to a corresponding electrode of the IC chip (fig. 1C), and by forming an adhesive layer (adhesive layer of tape 8) to cover the extended electrodes, the carrier tape being obtained by forming an exfoliate layer on one face of a base tape (exfoliated adhesive tape [col. 8, line 19]);

Ishida et al. does not disclose

peeling an interposer board from an electronic circuit board intermediate member, depressing the interposer board to an antenna circuit board tape to face antenna electrodes formed on an antenna circuit base material film and the extended electrodes.

Iketani et al. teaches a device wherein

peeling an interposer board from an electronic circuit board intermediate member (the tapes can be peeled apart simply by pulling on the films [0061]),

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the adhesive tape of Ishida et al. by using the peel able tape as taught by Iketani et al., in order to simplify the process of the product.

Emori et al. teaches a device wherein

depressing (the abstract disclose, the IC module has a contact-type and a non-contact-type function) the interposer board (smart card 1) to an antenna circuit board tape (101, fig. 2) to face antenna electrodes (102) formed on an antenna circuit base material film (100, fig. 2) and the extended electrodes.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the interposer board of Ishida et al. with an antenna circuit board tape as taught by Emori et al., in order to simplify the assembly of an antenna circuit board and reduce the cost.

**Re claim 5,** Ishida et al. show and disclose

A manufacturing apparatus for manufacturing non-contact ID card and the like comprising:

the electronic circuit board intermediate member (fig. 1C) being obtained by disposing interposer boards (100) on a carrier tape (8) at every predetermined interval (fig. 1C), each interposer board being obtained by mounting an IC chip (6, fig. 1C), by forming extended electrodes (9, fig. 1C) each connected to corresponding electrode of the IC chip (fig. 9), and by forming an adhesive layer (adhesive layer of tape 8) to cover the extended electrodes, the carrier tape being obtained by forming an exfoliate layer on one face of a base tape (exfoliated adhesive tape [col. 8, line 19]);

Ishida et al. does not disclose

means for peeling an interposer board one by one from an electronic circuit board intermediate member, and means for depressing the interposer



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board to an antenna circuit board tape to face antenna electrodes formed on an antenna circuit base material film and the extended electrodes.

Iketani et al. teaches a device wherein

means for peeling an interposer board from an electronic circuit board intermediate member (the tapes can be peeled apart simply by pulling on the films [0061]),

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the adhesive tape of Ishida et al. by using the peel able tape as taught by Iketani et al., in order to simplify the process of the product.

Emori et al. teaches a device wherein

means for depressing (the abstract disclose, the IC module has a contact-type and a non-contact-type function) the interposer board (smart card 1) to an antenna circuit board tape (101, fig. 2) to face antenna electrodes (102) formed on an antenna circuit base material film (100, fig. 2) and the extended electrodes.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the interposer board of Ishida et al. with an antenna circuit board tape as taught by Emori et al., in order to simplify the assembly of an antenna circuit board and reduce the cost.

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**Conclusion**


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5188469 US 7107672.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAOLIANG CHEN whose telephone number is (571)272-9079. The examiner can normally be reached on 7:00-5:00 (EST), Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Xiaoliang Chen XLC  
Examiner  
Art Unit 2841

  
Diego Gutierrez  
Supervisory Patent Examiner  
Technology Center 2800